Fig. 1

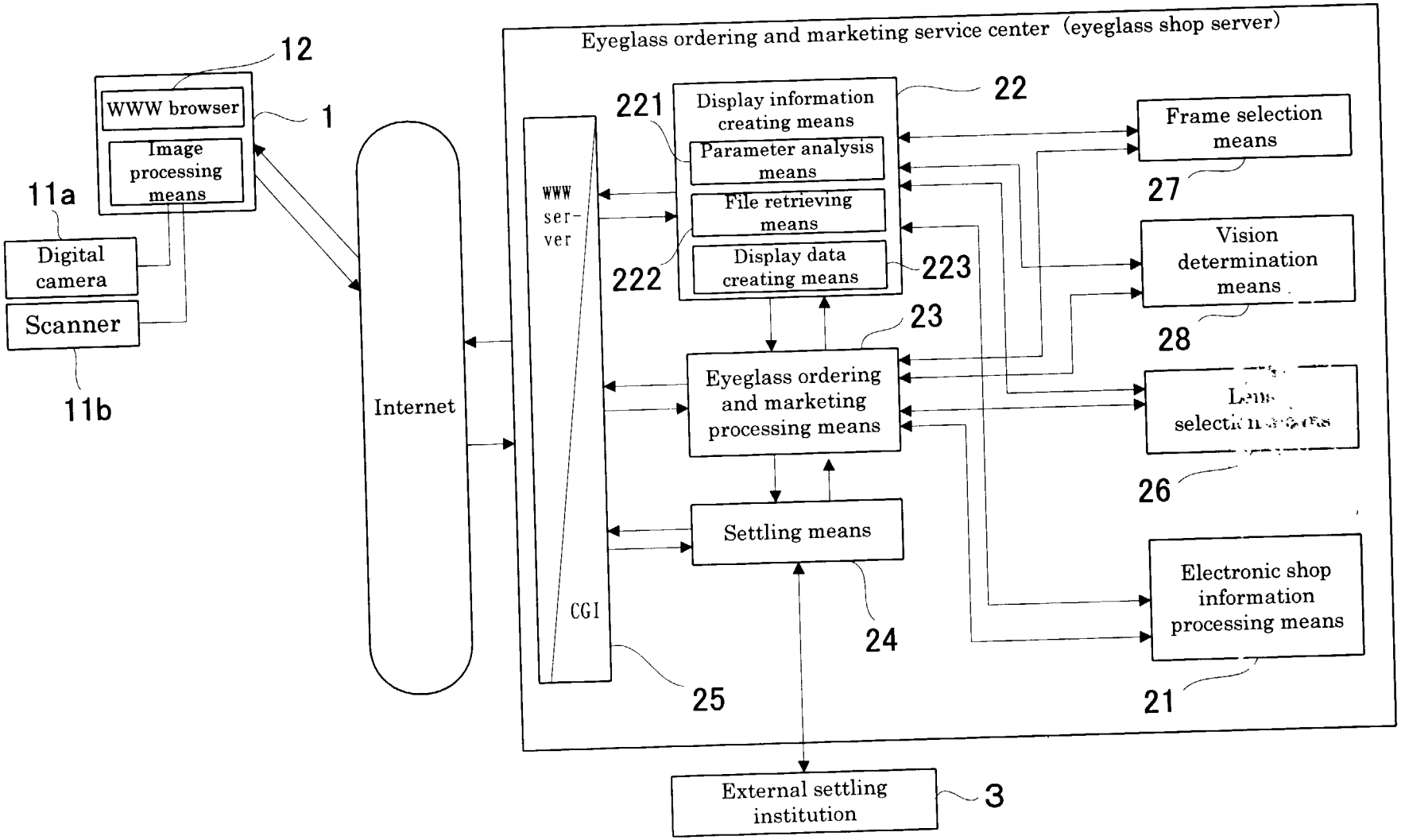

Eyeglass ordering and marketing service center (eyeglass shop server)
12
WWW browser
Image processing means
1
11a
Digital camera
Scanner
11b
Internet
WWW ser-ver
CGI
25
221
Display information creating means
22
Parameter analysis means
File retrieving means
Display data creating means
222
223
23
Eyeglass ordering and marketing processing means
Settling means
24
Frame selection means
27
Vision determination means
28
Lens selection means
26
Electronic shop information processing means
21
External settling institution
3

Fig. 2

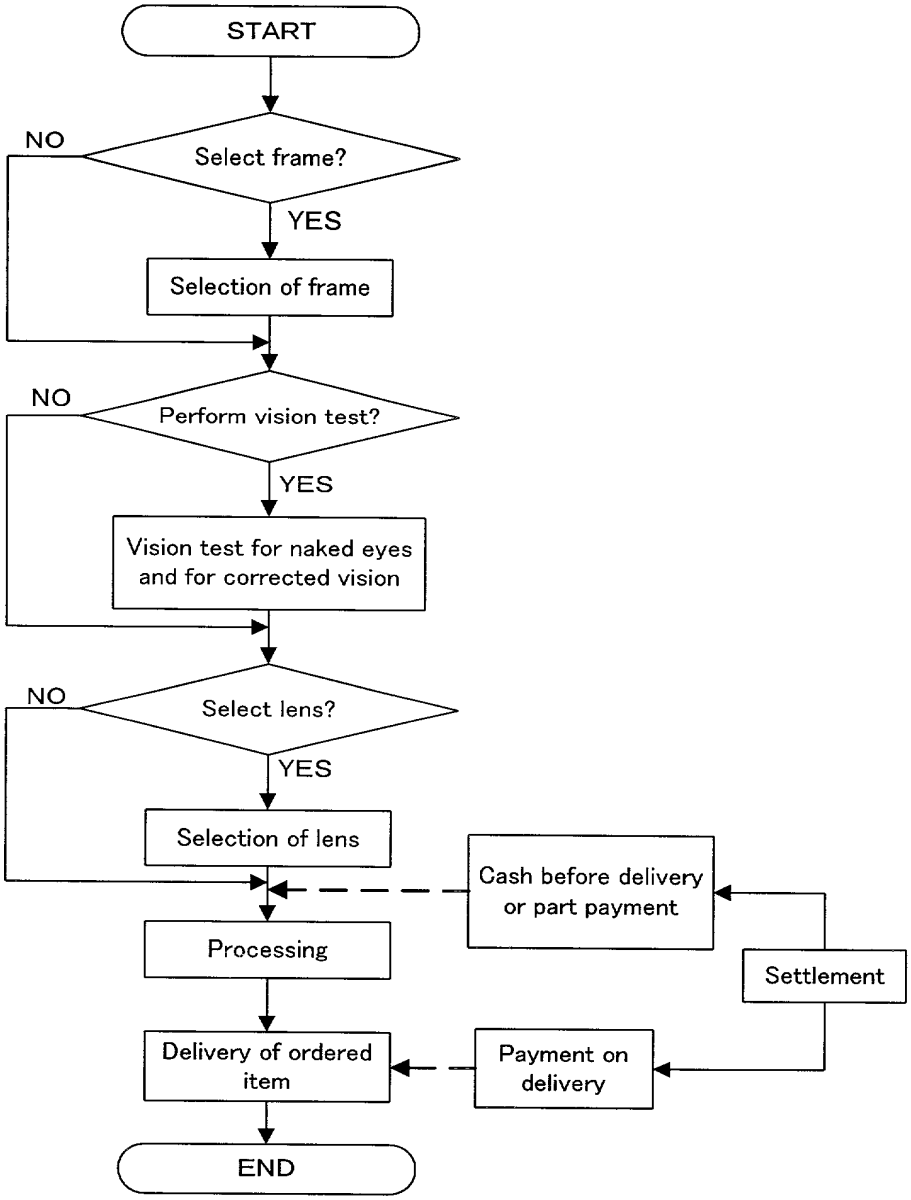

START
NO
Select frame?
YES
Selection of frame
NO
Perform vision test?
YES
Vision test for naked eyes and for corrected vision
NO
Select lens?
YES
Selection of lens
Cash before delivery or part payment
Processing
Settlement
Delivery of ordered item
Payment on delivery
END

Fig. 3

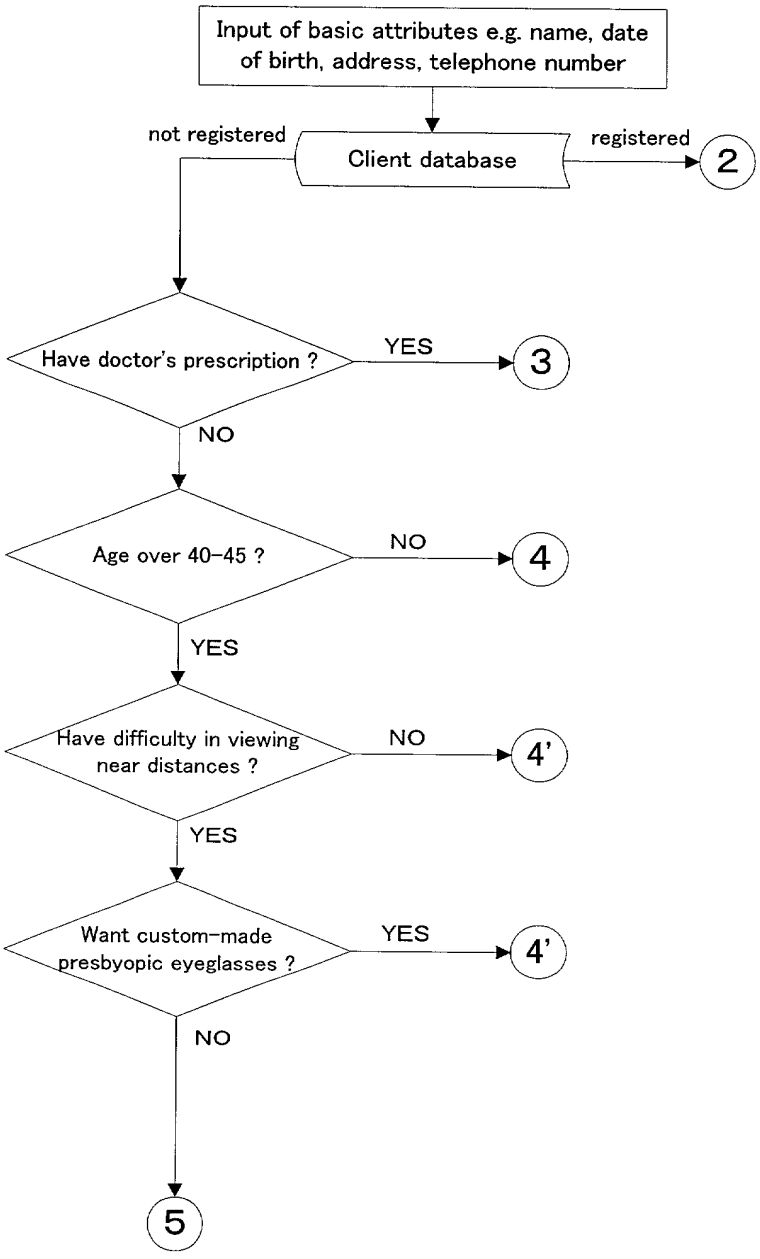

Input of basic attributes e.g. name, date of birth, address, telephone number
not registered
Client database
registered
2
Have doctor's prescription ?
YES
3
NO
Age over 40–45 ?
NO
4
YES
Have difficulty in viewing near distances ?
NO
4'
YES
Want custom-made presbyopic eyeglasses ?
YES
4'
NO
5

Fig. 4

Step 2 For registered client

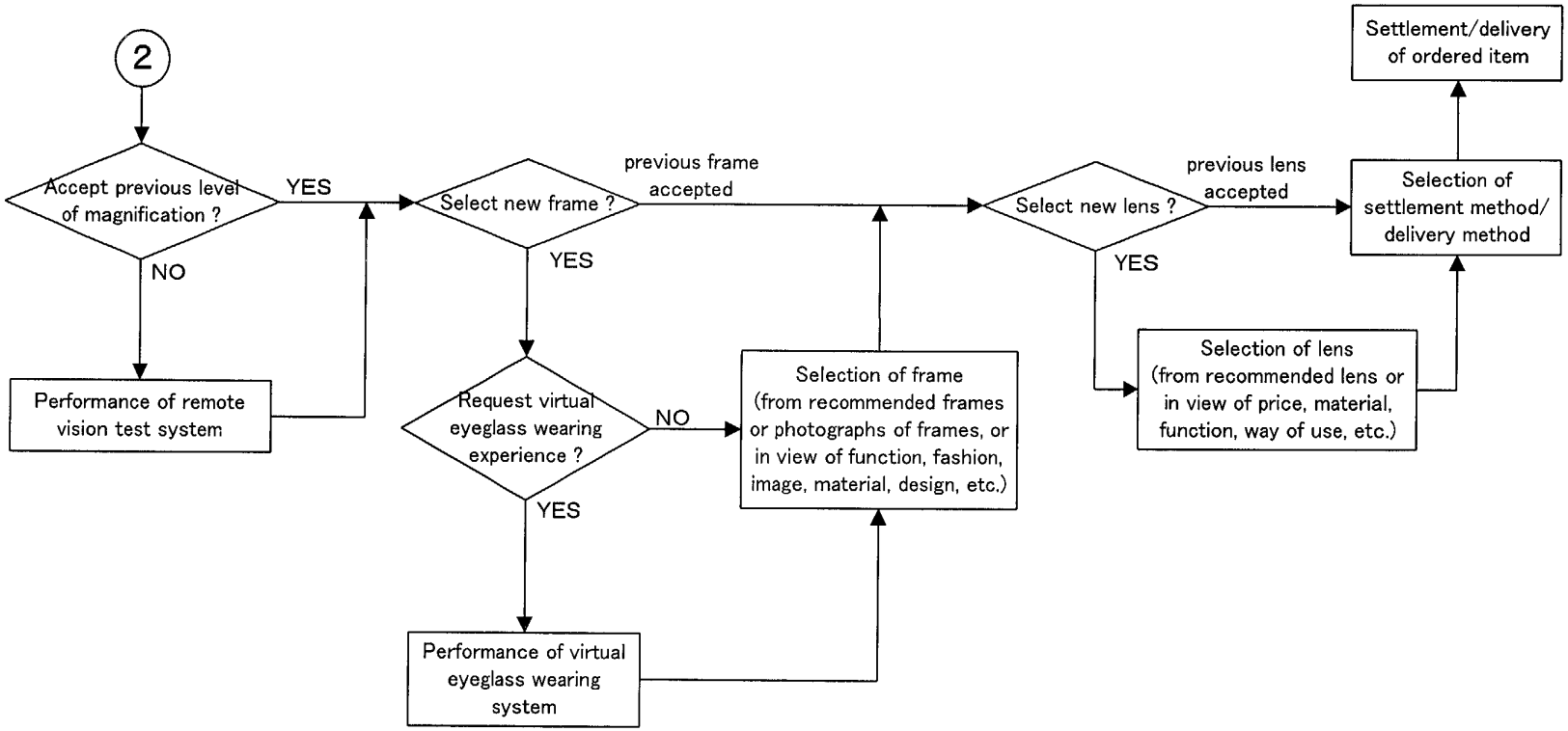


Fig. 5

Step 3 For non-registered client with doctor's prescription

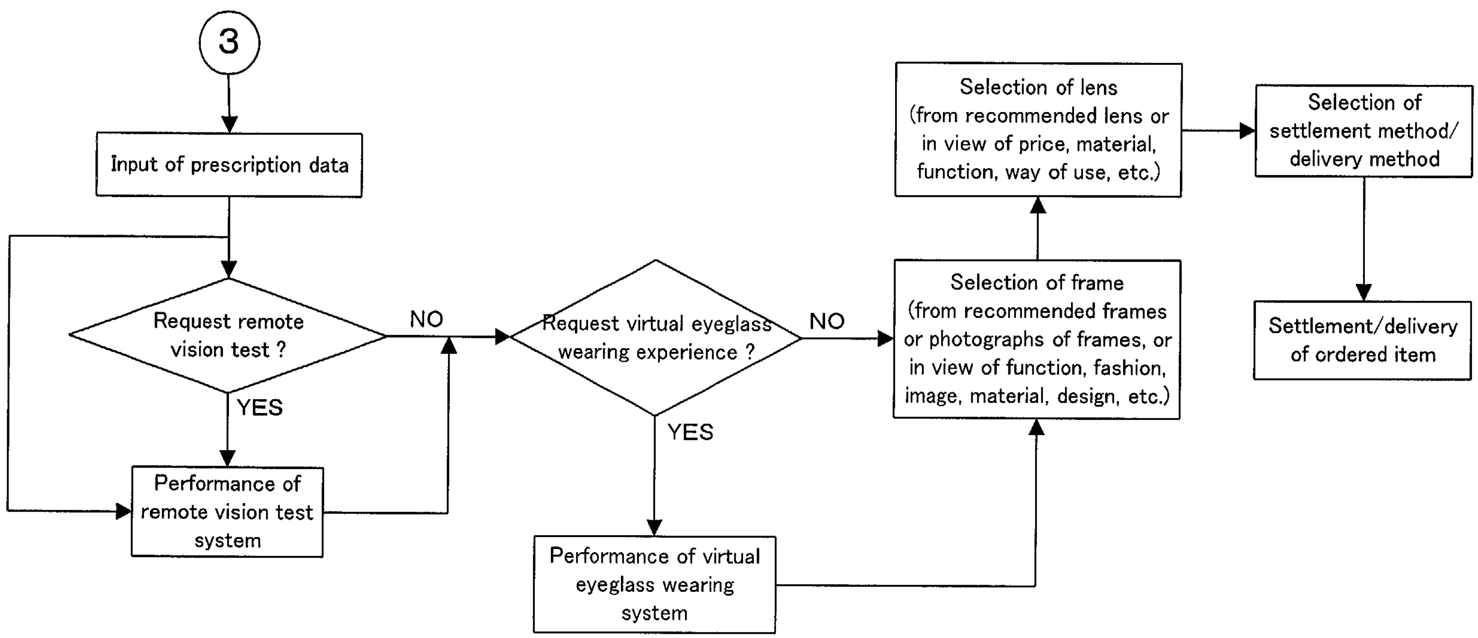


Fig. 6

Step 4 For non-registered client without doctor's prescription(under 40-45 years of age)

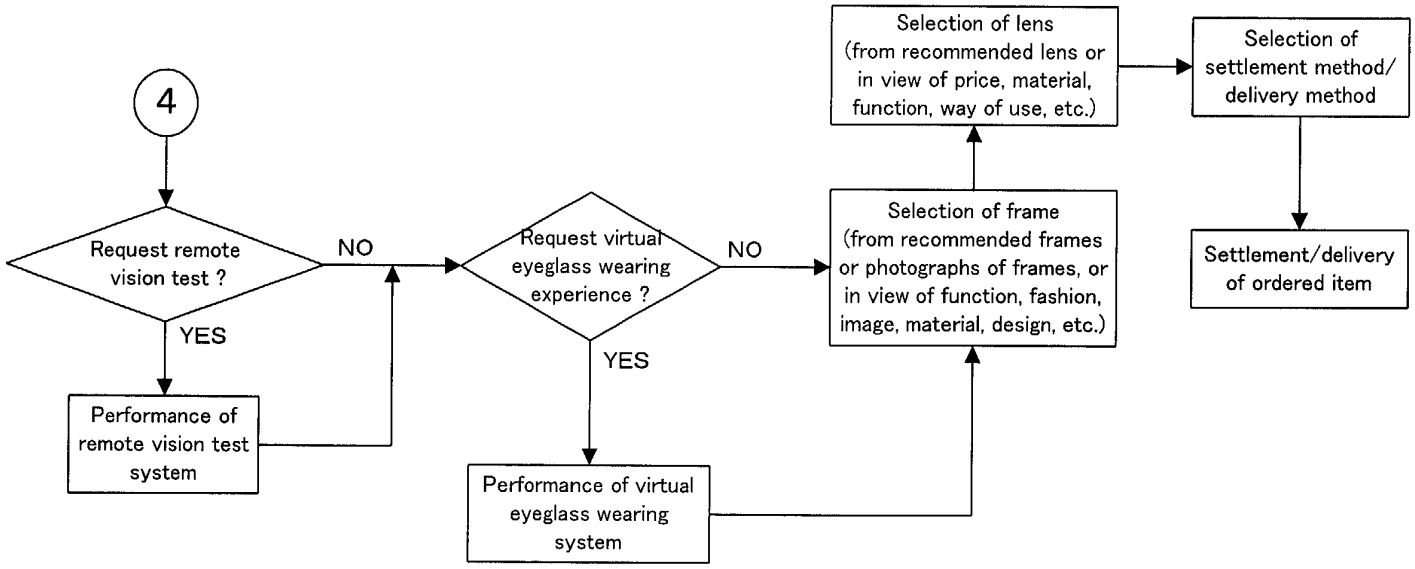


Fig. 7

Step 4' For non-registered client without doctor's prescription (over 40-45 years of age, having no subjective symptom or not requesting ready-made presbyopic eyeglasses despite subjective symptom)

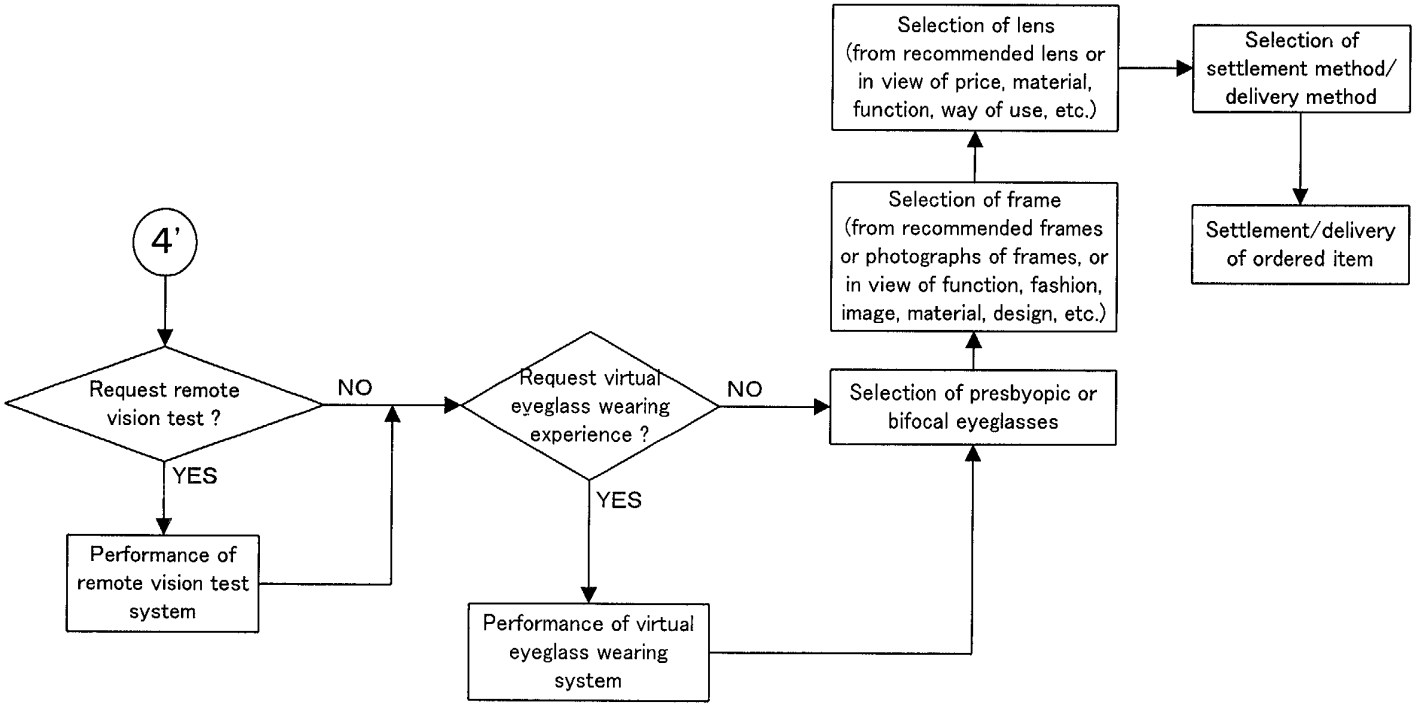


Fig. 8

Step 5 For non-registered client without doctor's prescription (over 40–45 years of age and requesting ready-made presbyopic eyeglasses)

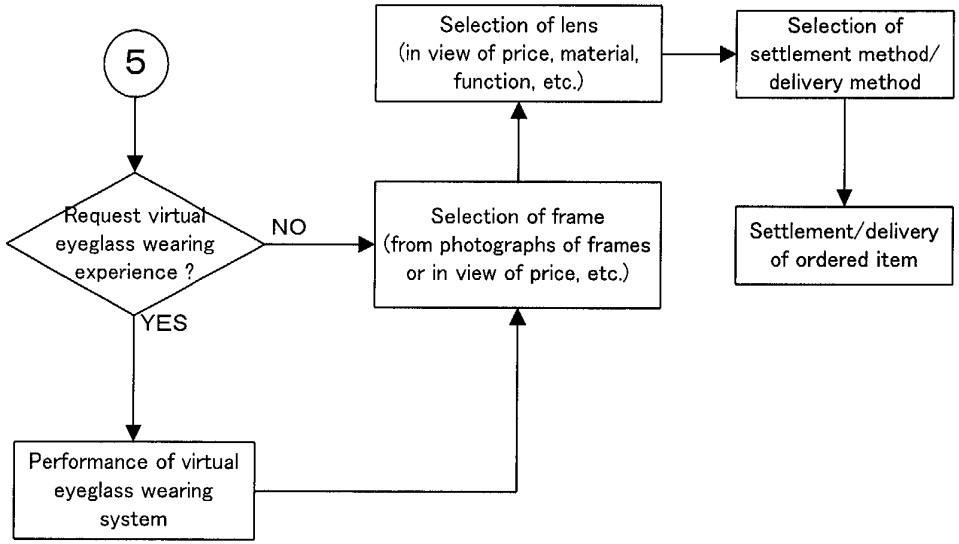


Fig.9

Lens Selection Reference Information Database

Name	
Client code	
Age	
Levels of magnification	
Lens function	Thickness of lens
	Weight of lens
	Durability
	Prevention of UV light
Colors	
Budget	
Intended use	

Fig. 10

Lens Database

Manufacturer's names	
Models	
Intended use	
Lens function	Thickness of lens
	Weight of lens
	Durability
	Prevention of UV light
Colors	
Prices	
Levels of magnification	

Fig. 11

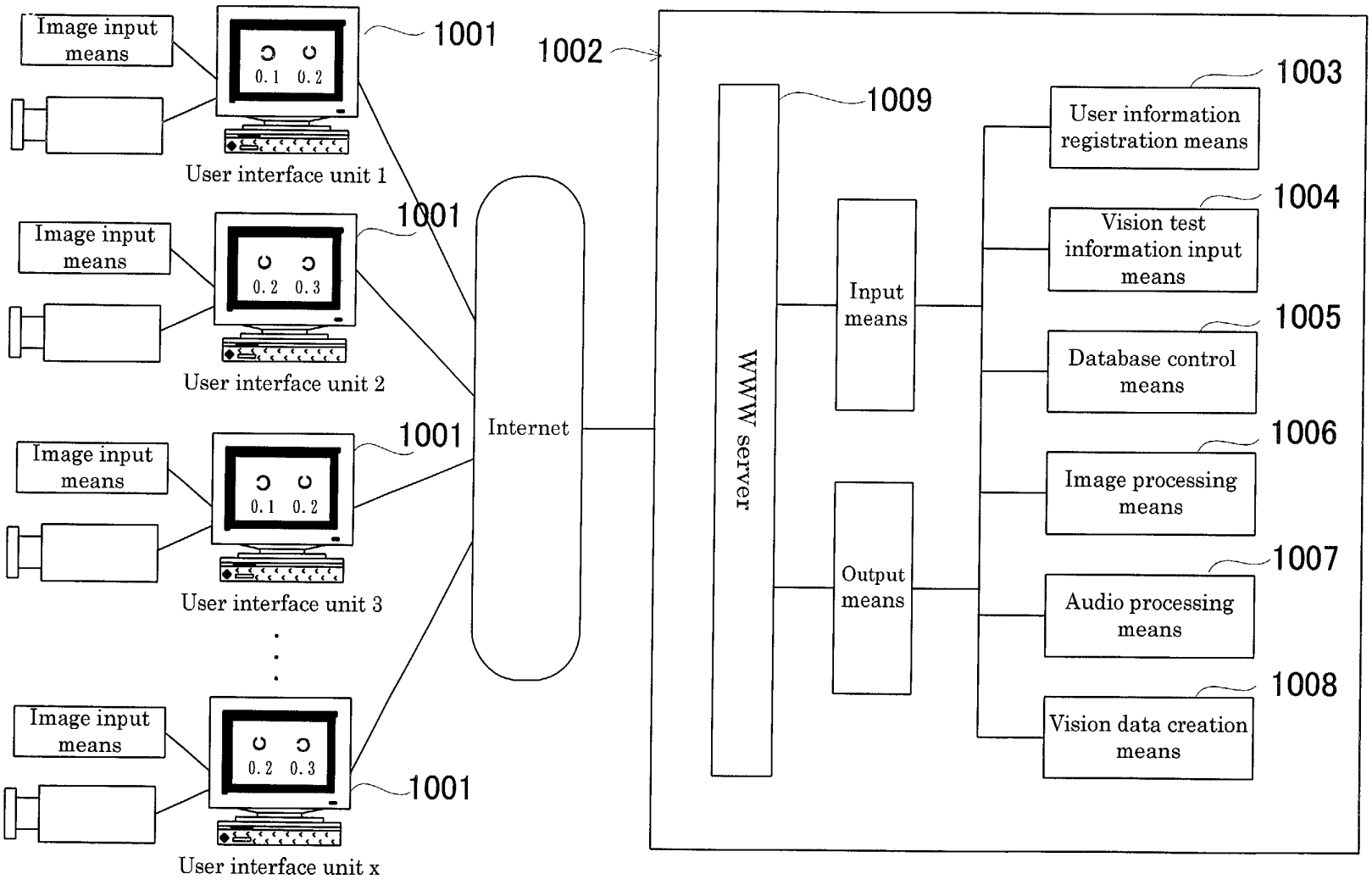


Image input means
0.1 0.2
1001
User interface unit 1
Image input means
0.2 0.3
1001
User interface unit 2
Image input means
0.1 0.2
1001
User interface unit 3
Image input means
0.2 0.3
1001
User interface unit x
Internet
1002
WWW server
1009
Input means
Output means
1003
User information registration means
1004
Vision test information input means
1005
Database control means
1006
Image processing means
1007
Audio processing means
1008
Vision data creation means

Fig. 12

User Information Database

Name
Address
Date of birth
Telephone number
Condition of eyes
Request for eyeglasses
User information identification(ID)
User password
User code
Facsimile number
E-mail address
URL
Computer environments

Fig. 13

Reference Database for Carrying Out Vision Tests

Purpose of use
Age
Previous lens magnification number
Vision with lenses of previous magnification number
Balance between right and left eyes with previous magnification number
Period of service of previous eyeglasses
Type of contact lenses (if used together with eyeglasses)
Vision desired to be attained by correction
Presence of diseases associated with vision

Fig. 14

Vision Test Database

Vision of uncorrected eyes
Corrected vision
Pupil distances
Corrected levels of magnification for distance
Corrected levels of magnification for reading
Dates of test
Name of a person who determined level of magnification

Fig. 15

Vision Table Database

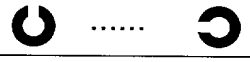
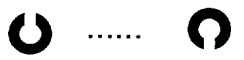
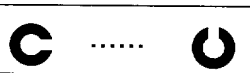
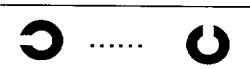
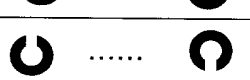
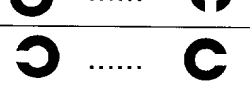
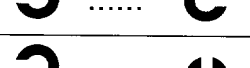
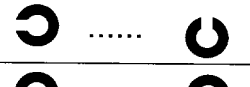
Level of magnification	Landolt rings (8 types, 8 directions)
0.1	
0.2	
0.3	
⋮	⋮
0.9	
1.0	
1.2	
1.5	
2.0	

Fig. 16

Nearsightedness Information Database

Levels of nearsightedness
Relationship between level of nearsightedness and vision
types of nearsightedness (levels of magnification)
Correcting method

Fig. 17

Farsightedness Information Database

Levels of farsightedness
Types of farsightedness
Correcting method for farsightedness

Fig. 18

Astigmatism Information Database

Levels of astigmatism
Types of astigmatism
Correcting method

Fig. 19

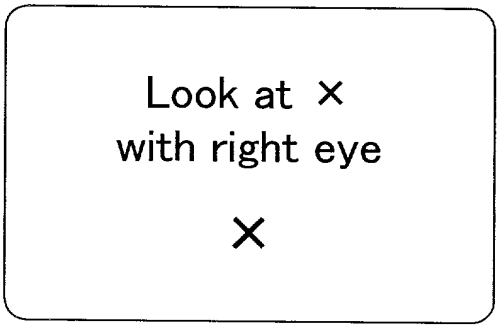


Fig. 20

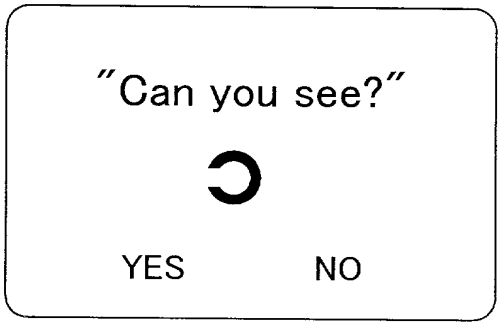


Fig. 21

Eyeglass Prescription　山田　太郎(Taro Yamada) 殿　25才(Age)

年　月　日(Date)　April 20, 2000

処方箋番号(Prescription number)

病院地番号(Hospital number)

		SPH. Spherical level of magnification	CYL. Astigmatism level of magnification	AXIS	PRISM	BASE	P.D Pupil distance
Level of magnification for distance	R	Concave 6.0D	Concave 2. 5D	180°			5 7 MM
	L	Concave 7.5D	Concave 2.5D	180°			
Level of magnification for reading	R						
	L						

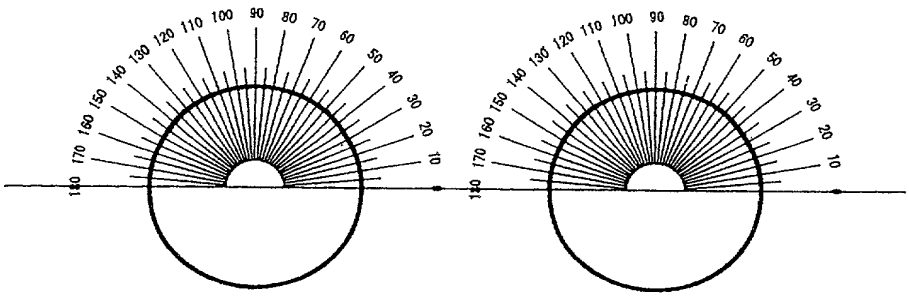


Fig. 22

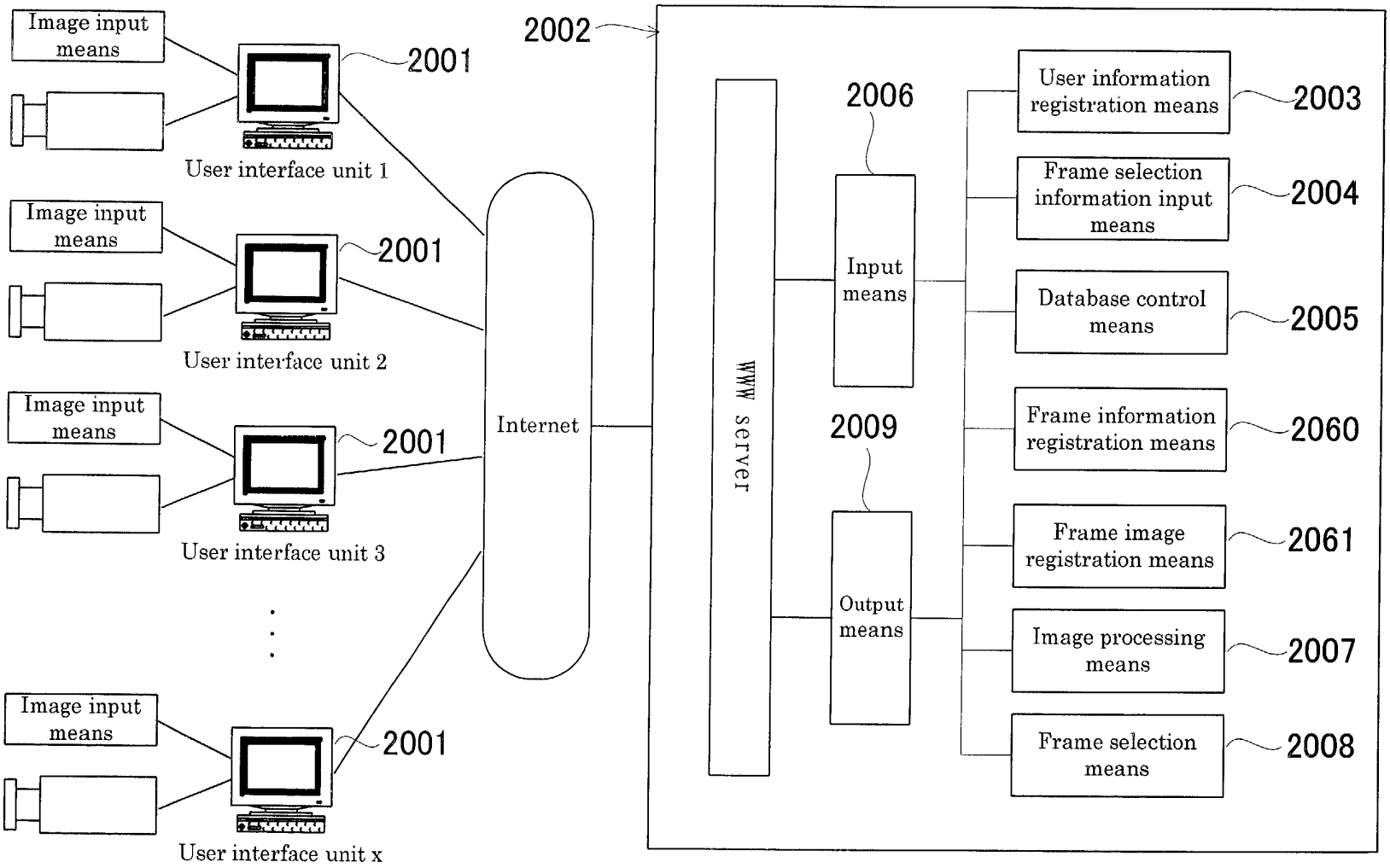


Image input means
2001
User interface unit 1
Image input means
2001
User interface unit 2
Image input means
2001
User interface unit 3
Image input means
2001
User interface unit x
Internet
2002
WWW Server
2006
Input means
2009
Output means
User information registration means
2003
Frame selection information input means
2004
Database control means
2005
Frame information registration means
2060
Frame image registration means
2061
Image processing means
2007
Frame selection means
2008

Fig. 23

User Information Database

Name
Address
Date of birth
Telephone number
Condition of eyes
Request for eyeglasses
User information identification(ID)
User password
User code
Facsimile number
E-mail address
URL
Computer environments

Fig. 24

Data Input from Frame Selection Information Input Means

Selection criteria (in text data)	Sense of fashion
	Budget
	Function
	Feeling of fitness to the user's face
Function 1 (front view of face image)	1. Distance between right and left pupils
	2. Widths from center of right and left pupils to feet of ears
	3. Opening angles of temples determined based on 2
Function 2 (side view of face image)	1. Distance from feet of ears to tops of corneas
	2. Bending positions of temples
	3. Distances between tops of corneas and foot of nose
	4. Opening angles of pad bridges determined based on 3

Fig. 25

Frame Functional Structure Database

Size	Actual Size(44ϕ～62ϕ)
Feature	Shape-memory alloy
	Super-light weight
	Super-elasticity
	Simultaneous function as sunglasses
	Portability
	others
Function 1 (front view of face image)	1. Distance between right and left pupils
	2. Widths from center of right and left pupils to feet of ears
	3. Opening angles of temples determined based on 2
Function 2 (side view of face image)	1. Distance from feet of ears to tops of corneas
	2. Bending positions of temples
	3. Distances between tops of corneas and foot of nose
	4. Opening angles of pad bridges determined based on 3

Fig. 26

Frame Ornamental Structure Database

Shape	WELLINGTON
	CELLULOID
	OVAL
	SQUARE
	TONNEAU
	BOSTON
	BUTTERFLY
	AUTO(DROP)
Material	Rimless(two-point, three-point)
	Metal + Nylon rimmed
	Celluloid + Nylon rimmed
	Metal
	Celluloid
	Brow line
	Combination
	others
Brand	Various brands
Color	Various colors

Fig. 27

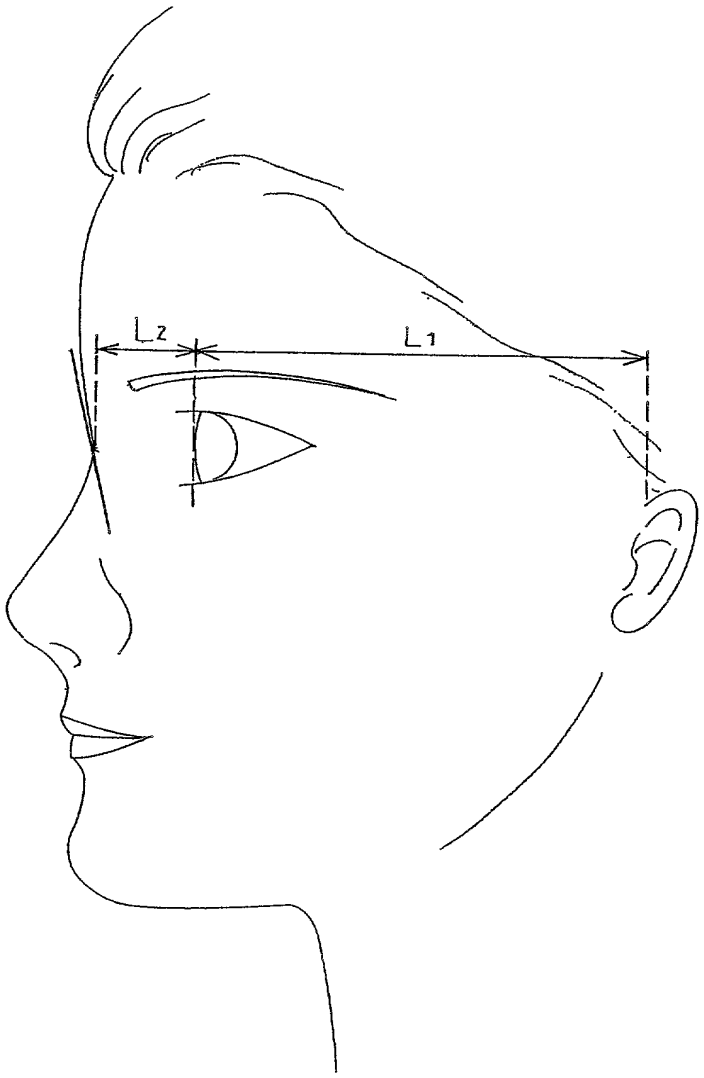


Fig. 28

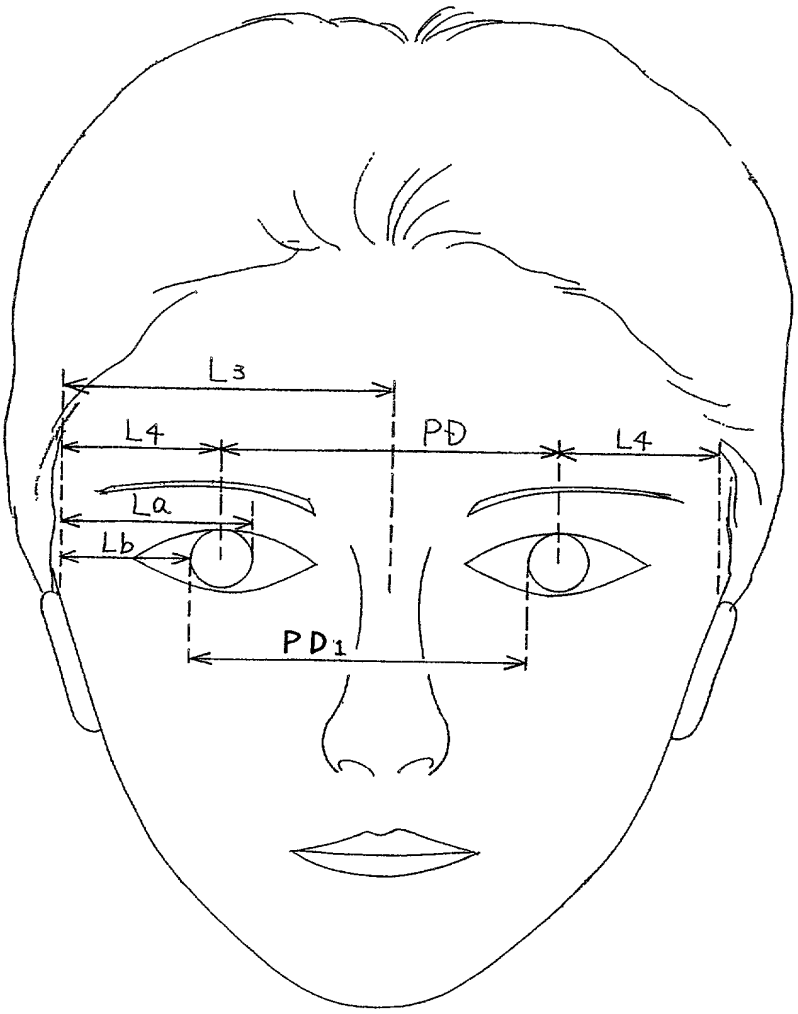


Fig. 29